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Working Within the Context of Three-Tiered Models of Prevention: Using Schoolwide Data to Identify High School Students for Targeted Supports

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This article addressed 3 objectives for assisting the research and teaching communities in developing 3-tiered models of prevention at the high school level. The authors first established the benefit of using systematic behavior screening tools within the context of 3-tiered models to identify and support high school students with academic and behavioral challenges. Second, they offered a structure for linking students demonstrating need with secondary (Tier 2) supports. Third, they provided illustrations of systematic approaches to detect high school students for whom primary prevention efforts were inadequate according to academic and behavioral data. The authors conclude by offering considerations for school psychologists assisting school-site teams with implementing, monitoring, and sustaining these procedures as part of regular school practices.

KEYWORDS high school, comprehensive, integrated, three-tiered (CI3T) models of prevention, systematic screening, Tier 2 supports

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Students with emotional and behavioral disorders (EBD) include a diverse group of individuals with externalizing (e.g., noncompliant, aggressive), internalizing (e.g., anxious, depressed, social withdrawn), and comorbid behavior patterns (Achenbach, 1991). Although prevalence estimates vary dramatically, recent estimates suggest 12% of school age youth have moderate to severe and 20% have mild forms of EBD (Forness, Freeman, Paparella, Kauffman, & Walker, 2012) Yet, less than 1% of students are typically eligible for special education services under the label of emotional disturbance (Individuals With Disabilities Education Improvement Act; 2004). As such, it is the responsibility of the general education community to prevent and respond to these students' academic, behavioral, and social needs (Lane, Menzies, Oakes, & Kalberg, 2012).

An important part of preventing the development of EBD in the school context is to use a three-tiered model of prevention. Such models provide a framework for delivering validated interventions to address behavioral and academic deficits. This is critical for the prevention of these problems and allows schools to respond more effectively to current instances of EBD (Walker, Ramsey, & Gresham, 2004). Yet, before students with EBD and those at risk for EBD can benefit from validated interventions, they must first be identified as potentially needing targeted supports. This is true not only for young students who show initial signs of concern upon school entry but also for secondary-age students in middle and high schools as they make transitions across the grade span (Lane, Kalberg, Parks, & Carter, 2008; Lane, et al., in press; Seidman, Aber, Allen, & French, 1996). As students transition from elementary to middle and from middle to high school curricular demands increase. Task demands are more intense as content becomes more complicated and students are expected to be self-directed. Furthermore, students tend to have less individual contact with teachers, shifting towards more independent learning and greater reliance on peer groups for reinforcement (Lane, Kalberg, Parks, et al., 2008; Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). As one might expect, relative to elementary and middle school years, the high school years are characterized by declining rates of academic engagement, attendance, and ultimately grades (e.g., Roderick & Camburn, 1999; Seidman et al., 1996). It is clear that many youth struggle to effectively negotiate the final years of formal education. The high school experience is especially challenging for students with EBD who have limited academic and self-determined behaviors (e.g., goal-setting and self-advocacy skills; Carter, Lane, Pierson, & Glaeser, 2006). It is imperative steps be taken to identify and support K–12 students who show initial signs of concern as they transition across the grade span.

In a three-tiered model of prevention, students for whom universal efforts (also referred to as *primary* or *Tier 1*) are insufficient can be identified through systematic schoolwide screenings and can participate in secondary

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(Tier 2) or tertiary (Tier 3) interventions. Although many high school educators are skilled in monitoring students' academic progress (e.g., progress towards graduation credit requirements, grade point average, core-course pass rates), very few examine behavioral performance by implementing behavior screenings (Lane et al., 2012).

We think it is imperative for all schools serving students pre-Kindergarten through twelfth grades to implement behavior screening tools with care to accurately detect students requiring additional support. This makes it possible to systematically connect students to evidence-based interventions at Tier 2 and Tier 3. Another critical element is to ensure sustainability of the model by building site-level personnel's expertise. Instructional time is simply too valuable to be lost on practices with insufficient evidence to indicate the practice (if implemented as planned, with integrity) will yield the desired changes in student performance. Similarly, time and support must be allocated for site-level personnel learning how to conduct systematic screenings in an efficient manner and then use data from screening tools to connect students to relevant Tier 2 and Tier 3 supports.

To address the lack of attention to behavioral screening practices, this article emphasizes three objectives. First, we establish the benefit of identifying and assisting students through a three-tiered model of prevention using behavior screening tools. Second, we introduce secondary intervention grids, designed to provide a structure for using data from systematic screening tools in conjunction with other data collected as part of regular school practices to link students to secondary supports. Next, we provide illustrations of how one high school used these secondary intervention grids to detect and support students for whom primary prevention efforts were insufficient according to academic and behavioral data. We conclude by offering practical guidelines and recommendations for school psychologists as members of school-site teams implementing, monitoring, and sustaining these procedures as part of regular school practices.

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The Role of Systematic Screening in Three-Tiered Models of Prevention

Three-tiered models of prevention offer a data-driven, coordinated system of support to prevent learning and behavior problems from occurring and to respond efficiently when problems do occur in one or both of these domains. Comprehensive, integrated, three-tiered (CI3T) models of prevention offer a schoolwide proactive framework responsive to the academic, behavioral, and social development of students (Lane et al., 2012).

These models includes three increasingly intensive levels of prevention: primary (Tier 1), secondary (Tier 2), and tertiary (Tier 3). The entire student body participates in primary prevention efforts such as schoolwide academic

programs, character development curricula (e.g., Positive Action; 2008), bullying prevention programs (e.g., Committee for Children, 2007), social skills programs (e.g., Social Skills Improvement System, Elliott & Gresham, 2007a), or schoolwide positive behavior supports, just by virtue of attending school. There are no eligibility requirements; every student enrolled has access to this level of prevention with an overarching goal of preventing problems from occurring in the given domain.

In contrast to primary prevention, secondary and tertiary efforts are not for every student. Secondary interventions are the next line of defense in supporting students with common areas of concern (Stormont, Reinke, Herman, & Lembke, 2012). Secondary supports are typically low-to-moderate intensity interventions such as behavioral contracts targeting specific academic and/or behavioral goals (Downing, 2002), self-monitoring interventions to improve academic performance (Mooney, Ryan, Uhing, Reid, & Epstein, 2005), check-in/check-out interventions to help students negotiate the multiple task demands of each school day (Hawkin, 2006), and academic interventions to improve specific skill sets such as reading comprehension (e.g., READ 180, Hasselbring & Goins, 2004). Tertiary supports are the most intensive supports reserved for students who do not respond to lower intensity intervention efforts. They are also for students exposed to several risk factors (e.g., substance abuse, parents with mental health issues, living in poverty, high transiency). Tertiary supports include functional assessment-based interventions to teach students more desirable replacement behaviors to meet their needs met by accessing or avoiding certain conditions (e.g., attention, tangible or tasks, or sensory experiences; Majeika et al., 2012); intensive, individualized reading interventions (e.g., Success Maker; Pearson, 2009); and evidence-based behavior supports such as cognitive behavior therapy (e.g., Shirk, Kaplinski, & Gudmundsen, 2009). Secondary and tertiary supports are supplemental. They are not intended to replace primary prevention programs; they are additive.

Pivotal to any three-tiered model of prevention is accurate identification of students who need more support (academic, behaviorally, or socially) beyond that offered by the primary plan. Fidelity of these models is driven, in part, by the accuracy of the screening tools and procedures used to determine patterns of responsiveness (Lane, Oakes, & Menzies, 2010). Procedures must include a designated school-leadership team to monitor systems for detecting students in need, identifying data-based areas to target (specific academic, behavioral, or social skills), and maintaining rigorous evidence-based interventions with measures of fidelity. Consequently, it is imperative mechanisms used to identify students as eligible for secondary and tertiary supports be reliable and valid (American Educational Research Association, American Psychological Association, & National Council for Measurement in Education, 1999). Only then can school-site leadership teams, parents, and students be confident all students will be considered for needed

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supports and those requiring additional supports receive them. It is important to avoid two errors: false negatives (students who do require extra supports are not identified for participation) and false positives (students who do not need extra support are unnecessarily provided additional assistance), with the latter being the lesser of two evils in educational research. Yet, given the stability of academic and behavioral patterns by the high school years, it is possible these concerns are diminished at this level (Fuchs, Fuchs, & Compton, 2010). These characteristics are important for both academic and behavioral screening tools.

Academic Screening

Most teachers are knowledgeable about monitoring academic performance. They frequently administer formative assessments and benchmarking assessments and use management systems (e.g., Schoolnet, Pearson, 2011) to make decisions about which students require additional support (e.g., additional reading instruction) and the focus of these supports (e.g., improving oral reading fluency; Lane, Kalberg, & Menzies, 2009). There are commercially available programs with demonstrated reliability and validity such as AIM-Sweb (Pearson Education, 2008; http://www.rti4success.org/screeningtools for related information).

In a three-tiered model, site-level or district-level teams establish assessment schedules that include administering curriculum-based measure probes at three points: fall, winter, and spring. These scores are used to benchmark students' performance on grade-appropriate measures (e.g., oral reading fluency). Students who do not reach benchmark standards are offered secondary (or in some instances, tertiary) supports according to students' individual needs and the school's resources. Once students are placed into these additional supports, probes are administered more frequently (e.g., weekly oral reading fluency probes) for progress monitoring purposes. Teachers use these brief measures to determine responsiveness to the more intensive intervention efforts.

However, a key limitation of screening tools is many are not yet validated for use at the high school level. As such, high school leadership teams must look to other sources of data such as grade point average, course failures, progress report grades, performance on state achievement tests, and teacher- or district-designed measures for detecting students who are struggling academically. Promising measures such as maze passages for reading and vocabulary matching for content areas are being validated for use in high schools (Espin & Chung, 2012).

Academic screening tools provide information on just one facet of students' overall repertoires. There are behavioral screening tools available for use across the K–12 continuum, with demonstrated reliability and validity at the high school level.

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Behavior Screening

Behavioral screening tools provide information on other dimensions—how students meet the behavioral and social demands of the school setting (Lane, Oakes et al., 2010). In our work we have noticed some teachers are hesitant to conduct behavior screenings, reporting they feel less comfortable (and in some instances, incapable) of making decisions as to students' behaviors that impact academic performance (Lane, Kalberg, Bruhn, Mahoney, & Driscoll, 2008). For teachers who are ambivalent about using behavior screening tools, we encourage them to remember they spend many hours per day with students and observe them in social situations, allowing them to make solid judgments about students' behavioral competencies. We also respectfully remind teachers they are privy to important contexts (e.g., student behaviors during classroom discussion and stressful academic demands) not often observable by most parents. Behavior screening scores (which are provided by teacher ratings) predict important academic and behavioral outcomes for high school students (Author, in press).

Whereas many school-site leadership teams focus on office discipline referral data to determine sociobehavioral risk (0–1 = low risk; 2–5 = moderate risk, and 6+ = high risk; McIntosh, Frank, & Spaulding, 2010), this approach is limited. Although most schools and districts monitor office disciplinary referral data as part of regular school practices, there are challenges regarding reliability and reactivity. First, the accuracy of these data depends upon the precision of the data collection system established at the school or district. Unless there is a system such as the Schoolwide Information System (May et al., 2000) implemented with documented fidelity, it is difficult to trust the accuracy of the data analyzed. Second, relying on office disciplinary referral data is a reactive rather than proactive approach given that a student must have a rule infraction severe enough to warrant an office disciplinary referral before they can be considered for secondary or tertiary supports. Students with internalizing disorders (e.g., anxiety, depression, and social withdrawal) are apt to go undetected and unsupported if office disciplinary referral data are the sole method of behavioral screening (McIntosh, Campbell, Russell, & Zumbo, 2009).

It is fortunate that there are a number of validated behavior screening tools available for use with middle and high school students in (or outside of) three-tiered models. Examples include the following: Student Risk Screening Scale (Drummond, 1994), Strengths and Difficulties Questionnaire (Goodman, 1997), the Social Skills Improvement System: Performance Screening Guide (Elliott & Gresham, 2007b), and the Behavioral Assessment System for Children, Second Edition (BASC-2) Behavior and Emotional Screening System (Kamphaus & Reynolds, 2007). We refer interested readers to Lane and colleagues (2012) for additional information regarding screening tools.

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When determining which screening tools to adopt, there are a number of factors to consider such as the types of students school leadership are interested in identifying. For example, if students with internalizing behaviors are the target population for identification, not all screening tools will detect students with these behaviors. Also, school teams should examine the norming samples to ensure the tool is reliable and valid for the particular context. Last, there are a number of feasibility issues to consider: preparation time, administration time, expertise required for scoring and interpreting, and the associated costs (Lane et al., 2012).

Behavior screening tools can be used in a parallel fashion with academic curriculum-based measures to benchmark performance. For example, school-site teams can administer behavior screening tools at three time points per year: fall (6 weeks after the onset of the academic year), winter, and spring. Whereas curriculum-based measures can be administered immediately after the academic year begins, it is necessary for teachers to familiarize themselves with students' behavioral patterns before completing the behavior screenings. This takes 4–6 weeks for most tools. The winter and spring assessment window can occur at the same time as the curriculum-based measure assessments.

Despite these similarities in benchmarking activities, progress monitoring tools for behavior are not yet widely available. This is a concern given progress monitoring tools are needed to determine how students respond to various interventions. Fortunately researchers are currently in the process of developing and validating efficient, reliable, valid, and sensitive progress monitoring tools. For example, Gresham and colleagues (2010) are developing the Brief Behavior Rating Scale for social behavior.

Analyzing Academic and Behavioral Screening Data Together

Rather than analyzing academic and behavior screening data in isolation, we recommend school-site teams analyze multiple sources of data (e.g., academic benchmark and behavior screening data) in tandem (Lane et al., 2012). While there is a temptation to look at academic and behavior performance as independent occurrences, a review the existing knowledge base makes it clear that behavior and academic performance do not occur in isolation (Jimerson, Egeland, Sroufe, & Carlson, 2000; Morgan, Farkas, Tufis, & Sperling, 2008). While the exact relation between academic and behavior performance patterns is not yet established, there is a relation between these two and long-term negative outcomes for students (e.g., school dropout; Jimerson et al.; McIntosh, Horner, Chard, Boland, & Good, 2006). For example, a student with below average reading comprehension skills may engage in escape-motivated behavior to avoid participating in classroom discussions of novels assigned as independent reading. Such escape-motivated

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behavior may manifest as noncompliance and disruptive behaviors (externalizing behaviors) to create a diversion, prompting a teacher to send a student to the office or in-school suspension as a consequence for behavior impeding instruction. Or, the escape-motivated behavior may manifest as an internalizing behavior such as somatic complaints prompting a trip to the nurse's office or painful shyness prohibiting participation during instructional activities involving peer interactions.

A teacher's main objective is to teach, with a primary focus on academic instruction. As illustrated in the previous examples, the teachers may decide on a secondary support such as participation in READ 180 to improve reading comprehension (Hasselbring & Goins, 2004). Once students' reading comprehension skills improve, they have the skill sets to participate more fully in content area classes and thereby improve academic performance. It is clear that students' behavior patterns must be considered when determining how to meet instructional needs. It is important for teachers to consider the behavioral supports needed to assist students in accessing the additional instruction provided (e.g., Tier 2 and 3 supports). In the examples above, it is likely teachers would need to incorporate behavioral techniques such as self-monitoring, differential reinforcement strategies, or behavior specific praise to increase compliance and minimize disruptive behaviors thereby maximizing instructional time (Cooper, Heward, & Heron, 2007). Similarly, it is likely the teacher might also need to use these and other strategies to increase participation (e.g., high-probability requests and increased opportunities to respond; Sutherland, Alder, & Gunter, 2003) as well as assist those with internalizing issues.

Behavior must not be ignored nor addressed in an isolated fashion. By providing evidence-based, feasible behavior supports in conjunction with academic supports, teachers can have greater efficacy in their instruction. Rather than having separate teams to address academic and behavioral concerns, we encourage leadership teams to focus on analyzing academic and behavioral data together. In the following sections, we offer a structure—secondary intervention grids—for linking students demonstrating need with secondary supports, with an emphasis on research-based supports. Then, we provide examples of how one high school uses these secondary intervention grids to detect and support students for whom primary prevention efforts were inadequate according to academic and behavioral data. Last, we conclude by offering practical guidelines and recommendations for school psychologists to assist school-site teams in implementing, monitoring, and sustaining these procedures as part of regular school practices.

Developing Secondary Intervention Grids to Organize Tier 2 Supports

In an ideal scenario, a school-site leadership team would begin by constructing a CI3T plan with graduated supports for academic, social, and behavioral

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domains (see Lane et al., 2009 for examples). As part of this plan, schools establish a primary prevention (Tier 1) component including the following: (a) a mission statement, (b) a purpose statement, (c) schoolwide expectations, (d) responsibilities for key stakeholders (students, teachers, parents, and administrators) for the core academic program, PBIS framework, and social skills components, (e) procedures for teaching the CI3T plan (faculty and staff, students, and parents and community), (f) procedures for reinforcing stakeholders for participation, (g) procedures for monitoring program implementation (treatment integrity), student outcomes (academically, behaviorally, and socially), and stakeholder perceptions about the goals, procedures, and outcomes of the CI3T plan (social validity). Once the primary prevention plan is constructed, the next step is to establish Tier 2 and Tier 3 supports for students requiring assistance—be it remediation or enrichment—beyond Tier 1 practices.

In working with schools to develop Tier 2 and 3 supports as part of their CI3T plan, we follow a six-step process to create intervention grids: a master list and organizational structure for operationalizing all supports in their school designed for "some" students (Tier 2) and "few" students (Tier 3). In the following sections, we describe each step in this process (see Figure 1).

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Step 1. Construct an Assessment Schedule

The first step is for the team to develop a master assessment schedule on the basis of the monitoring procedures specified in the primary prevention plan. This schedule includes a listing of all assessments conducted as part of regular school practices and when those assessments occur. For example, the Student Risk Screening Scale (a seven-item universal screening tool completed by teachers for all students) may be completed three times per year: (a) approximately 6 weeks after the school year begins in September, (b) prior to winter break in December, and (c) approximately 6 weeks before year end in April. These data may correspond to academic progress report data also completed by teachers at these same intervals.

In addition to student performance on academic measures (e.g., progress reports, course grades), behavioral measures (e.g., Student Risk Screening Scale scores, office disciplinary referrals earned, unexcused absences), referrals (e.g., to the prereferral intervention team, and social worker support), and program measures are also included. Specifically, measures are included to determine stakeholders' views of the primary prevention plans' goals, procedures, and outcomes (social validity) as well as the extent which CI3T primary prevention elements (academic, behavioral, and social) are put in place as planned (treatment integrity). When monitoring the schoolwide programmatic elements, it is important to assess the full scope of content addressed. For example, implementation of the PBIS framework may be

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Support	Description	School-wide Data: Entry Criteria	Data to Monitor Progress	Exit Criteria
READ 180 (Stage C) Reading Intervention	Students participate in a 50 min reading instructional block during their study hall period. Students meet in the computer lab for participation in the online portion 20 min daily. Instruction is relevant to high school students. Students use a progress management system to monitor and track their own progress. Instruction is taught by special education teachers and general education teachers with training in the READ 180 Curriculum.	(1) Students in grades 9 – 12. (2) Reading performance basic or below basic on state assessment (but above 4th grade reading level). (3) SRSS risk scores in the moderate range (4 – 8).	Student Measures: Meeting individual READ 180 reading goals: (1) Progress Monitoring with Scholastic Reading Inventory (2) Writing Assessments (3) formative assessments (vocabulary, comprehension and spelling) (4) Curriculum-based Assessments (5) Attendance in class Treatment Integrity: Teachers monitor performance and attendance in class. Completion of weekly checklists for activities completed. Social Validity: Students and teachers complete surveys regarding the importance of the goals, program procedures, and outcomes.	Students meet instructional reading goals. SRSS score in the low risk category (0 – 3) on the next screening time point.
Project Self Determination	Direct instruction of self-determination skills taught individually by a research assistant during students' study hall class. Tell, Show, Do lesson format to teach the following skills: • Organizational skills • Study skills • Note taking • Participating in discussions • Decision making • Asking for help 3 days per week; 30 min lesson; 8 weeks	(1) Students in 10th or 11th grades (2) Academic: 2+ Course Failures (D or F/E) in first semester (3) Behavior: SRSS – Moderate (4 – 8) or High (9 – 21) Risk (4) Schedule: Enrolled in a Study Hall Period	Student Measures: (1) AIR Self Determination Scale (pre and post intervention) (2) Social Skills Rating Scale (SSRS, Gresham & Elliott, 1990; pre and post) (3) Student and Classroom Teachers completed check out form with 7 items related to the SD skills taught (weekly) (4) Attendance rates (5) Office Discipline Referrals Treatment Integrity: Daily completion of component checklist of critical lesson elements by interventionist, 25% of lessons observed by a second rater for reliability. Social Validity of the intervention (teachers and student; pre and post).	Completion of Project Self Determination (8 week course – one quarter)

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Mentoring Program (Sophomores/ Juniors/ Seniors)	Focus is on academic achievement, character development, problem-solving skills, improving self-esteem, relationships with adults and peers, and school attendance. Volunteer teachers serve as mentors; meeting weekly (30 – 60 min) with students during the school day.	(1) 10th/11th/ 12th graders (2) Behavior: SRSS: High (9-21) or Moderate (4-8) by either 2nd or 7th period teacher ODR ≥ 2 Absences ≥ 5 days in one grading period (3) Academic: GPA ≤ 2.75	Student Measures: (1) Increase of GPA at mid-term and semester report cards. (2) Decrease of ODR monitored weekly. (3) Reduced absences (fewer than one per quarter) Treatment Integrity: Mentors complete weekly mentoring checklists to report meeting time and activities. Social Validity: Pre and post surveys for students and mentors.	Yearlong support Students who no longer meet criteria next fall Seniors: graduation
Targeted Algebra II Study Hall	Direct, targeted instruction of Algebra II learning targets by math teachers. Time will be used to re-teach concepts, provide one-on-one or small group instruction and offer greater supports for students struggling to pass the graduation requirement course. 50 min per day until exit criteria is met.	(1) 12th graders (2) Algebra II grade drops below a 75 at any point in the semester (3) Have study hall time available and permission of 5th period teacher (4) Self-selecting to engage in study hall	Student Measures: Algebra II classroom grades Daily class average if grade is ≤ 75 Treatment Integrity: Daily monitoring of the lessons covered and student attendance Social Validity: Pre and Post Student Surveys	Algebra II Grade increases to satisfactory level (above 75%).
ACT Intervention	Depending on GPA and PLAN test, student will receive targeted intervention related to achieving the HOPE college scholarship. Direct instruction on test taking strategies and skills for achieving a 21 on the ACT or increasing GPA to 3.O on Tennessee Uniform GPA (not county calculations).	11th graders SRSS: High (9-21) or Moderate (4-8) by either 2nd or 7th period teacher GPA ≤ 2.50-3.20 and/or Score on the PLAN test (predicted score on ACT below Hope Scholarship qualifying score of 21)	Student Measures: Completion of course/assignments Attendance in ACT targeted courses Communication with students/parent Treatment Integrity: Teacher completed component checklist of lessons completed. Social Validity: Pre and post, student and parent surveys	Completion of individual target plan.

FIGURE 1 Secondary intervention grids.

assessed using the Schoolwide Evaluation Tool (Sugai, Lewis-Palmer, Todd, & Horner, 2001). Implementation of all three core components may also be measured using behavior component checklists. Teachers may complete monthly or quarterly self-evaluations and administrators might use the same behavioral component checklist to evaluate teachers once a semester. This information is important to collect to provide not only formative feedback and coaching support to teachers but also accurate information regarding patterns of responsiveness (Cochrane & Laux, 2008). For example, it would not be accurate to conclude a student is nonresponsive to primary prevention efforts if data were not available to suggest the primary prevention plan was implemented with sufficient fidelity (e.g., >80%) by the school as a whole as well as by individual teachers (Bruhn, Lane, & Eisner, 2012).

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Step 2. Identify Secondary Supports

The second step is for the school-site leadership team to create a master list of all extra supports in place for students in need of remediation as well as those in need of enrichment. For example, some schools may have Check In Check Out (Crone, Hawken, & Horner, 2010), Check and Connect (Christenson et al., 2008), mentoring opportunities, group counseling, individual counseling, homework clubs, targeted study halls, and functional assessment-based interventions developed by behavior specialists. Teams then classify each support as either secondary (Tier 2, supports for some) or tertiary (Tier 3, supports for just a few students with multiple risk factors). Ideally, identified supports are research-based practices (e.g., Check and Connect; READ 180) and strategies (e.g., behavioral contracts) with sufficient evidence to suggest changes in student performance are likely provided the practice is implemented as planned (for additional Tier 2 supports, see Stormont et al., 2012).

For example, Check and Connect is one program with sufficient evidence to warrant use. Developed at the University of Minnesota, Check and Connect targets dropout prevention by connecting students with an adult referred to as a monitor. The monitor (or mentor) works with the student, families, teachers, and community, as appropriate to keep students engaged in school until graduation. Monitors provide monthly basic interventions (e.g., sharing data monitoring system, providing feedback on the students' academic progress, information regarding the importance of staying in school, and problems solving challenges to school engagement) or intensive interventions (e.g., "problem solving, academic support, and recreational or community service exploration," Sinclair, Christenson, Evelo, & Hurley, 1998, p. 13).

Christianson and colleagues (1998) examined the school engagement of 94 students with learning and behavioral disabilities who participated in Check and Connect in middle school and then were randomly assigned to

continue the intervention in ninth grade. By the end of ninth grade, students participating in Check and Connect were more likely than students in the control group to be enrolled in school, complete course assignments, and earned significantly more credits and be on track for graduation in four years.

READ 180 is another Tier 2 support with established benefits. READ 180 (Scholastic) is a reading curriculum designed for students who are 1 to 2 years below grade level in 4th–12th grades. The curriculum provides multimedia tools to enhance students learning and engagement. The program targets individualized instruction in the areas of phonemic awareness, phonics, fluency, text comprehension, academic vocabulary, spelling, writing, global perspectives, and college and career readiness skills using high-interest nonfiction text and video. The audiobooks and leveled paperbacks offer multiple genres of current and high interest literature. Students and teachers can monitor progress through the *Dashboards* included with the program. Screening, placement, progress monitoring, formative and summative assessments are used. Further, publishers provide professional development for teachers using the curriculum. Lang and colleagues (2009) examined the effect of three 90-min reading intervention programs (REACH [multicomponent program addressing, reasoning, writing and spelling], Reading Intervention through Strategy Enhancement [RISE], and READ 180) relative to regular school instruction for 1,265 ninth-grade students. The year-long randomized control study found READ 180 produced the greatest gains in reading for students with moderate reading difficulties (those in need of secondary supports). Figure 1 shows an example of how READ 180 could be used as a Tier 2 support at the high school using the intervention as a structure for explaining the logistics of identifying students, implementing the program, monitoring student progress, and determining when to conclude the support.

In addition to being validated programs, Tier 2 supports can also include validated practices. For example, behavioral contracts have adequate evidence to support changes in student behavior (Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). Behavior contracts are a written agreement between students, teachers, and, often, parents. Contracts state the relation between expected behavior and consequences (Lane, Menzies, Bruhn, & Crnobori, 2011). With the use of behavior contracts, students have demonstrated improvements in academic outcomes such as academic productivity (Kelley & Stokes, 1982) and writing mechanics (Newstom, McLaughlin, & Sweeney, 1999). Also, behavioral contacts have been effective in decreasing truancy (Trice, 1990) and off task and disruptive behaviors (Williams, Long, & Yoakley, 1972).

As part of this step, available practices or strategies are described in sufficient detail to allow stakeholders to be aware of the parameters. This information should include a description of who provides what for whom, and under what conditions (Lane, Wolery, Reichow, & Rogers, 2006). Moreover, the description includes information on (a) treatment dosage (e.g., number

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of days a week and length of sessions), (b) context (e.g., in the cafeteria before school, in a classroom during study hall, or in a conference room after school), and (c) intervention agent (e.g., reading specialist, teacher, paraprofessional, or parent). For example, the description of READ 180 includes the following: 50-min intervention session, 5 days per week, during study hall period, held in the computer lab with general or special education teachers (see Figure 1). It is important to include sufficient detail to determine if the logistics of the support (e.g., after school tutoring program with late transportation home for participating students) enables individuals to access the support (e.g., students without their own transportation home). Also, it is important to note, a Tier 2 support is not a person; instead, it is what the person does: the practice, strategy, or program (for other Tier 2 behavioral supports, see Cooper et al., 2007).

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Step 3. Determine Entry Criteria

After each support is operationally defined, the next step is to determine how to connect students with these supports according to need. To ensure all students are given an equal opportunity to receive supplementary supports, it is important to specify an objective set of inclusion and exclusion criteria. Moreover, entry criteria are established by specifying cut off scores on schoolwide data collected as part of regular school practices. Often multiple sources of data are used to determine eligibility. For example, in Figure 1 students invited to participate in READ 180 are in Grades 9–12, score basic or below basic on state reading achievement tests, read at above the fourth-grade level, and have moderate behavioral risk screening scores (Student Risk Screening Scale; score 4–8). These criteria communicate a student has moderate reading difficulties and behavioral indicators (screening and tardies) to indicate possible school withdrawal.

This process involves a team-based approach in which school-site team members meet together, involving the parent and student in the decision-making process. Data collected as part of the regular school practices (e.g., behavior screenings, grade point average, course failures, attendance) are reviewed by the school-site team members and shared with the team. Prepared Tier 2 (or Tier 3) intervention grids are reviewed by all parties to examine the range of supports available. For example, a student may meet entry criteria for READ 180, Project Self-Determination, and Mentoring supports. In this case, the team would make a decision as to which support(s) the student should access according shared priorities. In this case, because reading is a keystone skill, the team may decide to enroll the student in the READ 180 support. They may also decide to recommend the mentoring support to help promote engagement in school while the students' works to improve reading skills if the student was not engaged in other aspects of school-life (e.g., band, clubs).

Step 4: Identify Outcome Measures

In Step 4, information is provided regarding how students are responding to a given Tier 2 support. For example, if students are participating in a behavioral contract to increase homework completion, the teacher might monitor progress on the percentage of assignments completed each week in each class period, as well as the accuracy of the assignments completed. These data could be graphed and reviewed by the student and teacher to monitor progress of homework completion and accuracy in each class. Similarly, programs such as READ 180 include measures to assess student progress. It is also important to consider student attendance, particularly at the high school level. Students must be present to benefit from instructional programming delivered with high fidelity.

Two other measures recommended are treatment integrity and social validity, as defined previously. For each level of prevention it is important to determine the extent to which the intervention is implemented as conceptualized. Without this information it is difficult to draw accurate conclusions regarding intervention outcomes with respect to patterns of responsiveness. Social validity is another important indicator. Social validity data collected at intervention onset provides information on the extent to which the stakeholders are comfortable with the goals, procedures, and potential outcomes. If social validity ratings are low, it is possible to conduct additional training to assist stakeholders (e.g., students, teachers, parents) in becoming more comfortable with the support. In theory, if the intervention is viewed as socially valid, it is likely the intervention will be implemented with integrity, ultimately leading to meaningful, lasting changes—the goal of all intervention efforts.

Step 5. Identify Exit Criteria

In Step 5, team members specify exit criteria. Exit criteria refer to the indicator and performance levels that must be met before the intervention is concluded. As part of this process, a student's progress is examined, the student either continues with the secondary supports, returns to primary prevention efforts in isolation, or is provided tertiary supports if warranted. For example, the leadership team may determine the READ 180 program has been successful if a student has (a) met their instructional reading goals across all curricular measures and (b) scores in the low-risk category on the Student Risk Screening Scale during the winter time point. In this instance, the Tier 2 support may be concluded and the student exited from the program. However, if after 10 weeks the student is not responding as evidenced by progress monitoring and formative assessment scores, the decision may be made to determine if a Tier 3 support such as a functional assessment-based intervention is needed (Majeika et al., 2012).

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Step 6. Consider Additional Needs

We also encourage teams constructing this list of supports to consider other practices, strategies, or programs they might add to this menu of options for students. When seeking information on evidence-based programs, consider reviewing sources such as the What Works Clearinghouse (http://ies.ed.gov/ncee/wwc/) and the IRIS Center for Training Enhancements (http://iris.peabody.vanderbilt.edu/index.html).

In the following section we provide an illustration of how one high school used this process to conduct Tier 2 supports, first with university support, and subsequently on an independent basis with limited technical assistance.

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An Illustration: Liberty High School

Liberty High School is an inclusive high school located in a southern state, serving approximately 2,000 students in 9th through 12th grades. Most students (>88%) are White, with approximately 13% of students considered economically disadvantaged. Seven percent of students received special education services. The graduation rate was approximately 91.5%.

Constructing the CI3T Model

Liberty High School leadership team attended a year-long training series hosted by a local University. Team members included: an assistant principal (lead team member), two general education teachers, a special education teacher, the school psychologist, and a behavior consultant served on the team as district representatives. The goal of the training series was to develop all three tiers of a CI3T model, integrating academic, social skills, and behavioral components. As part of the primary prevention program, the team identified academic, behavior, and social skill responsibilities for administrators, teachers, students, and parents. The academic component focused on coursework addressing Common Core State Standards (National Governors Association Center for Best Practices and the Council of Chief State School Officers, 2011) and state graduation requirements. Teachers were expected to maximize instructional time by providing bell work and closing activities. Further, teachers and parents were responsible for using the online parent communication system for monitoring student grades, assignments, and attendance (e.g., Parent Connection; Campusware, 2007). The leadership team carefully developed a positive behavior intervention and support framework (PBIS) as they were very concerned about student behavior negatively impacting instruction (e.g., teachers' losing instructional time by responding to undesirable behaviors). The PBIS framework included: establishing schoolwide behavior expectations, teaching and reinforcing students when expectations were met, and monitoring outcomes (student performance, treatment integrity, and social validity). An overarching goal

was to increase instructional time as well as the quality of instruction provided. The social skills component stated teachers and students were expected to participate in cultivating a positive school environment. Students were expected to demonstrate schoolwide expectations, control tempers during conflict, and discuss perceived injustices in an appropriate way. Teachers and administrators were expected to greet students daily and teach and model positive interactions. To facilitate students' expressing perceived injustices, teachers were expected to provide an opportunity to articulate these concerns. Administrators were to provide forums for students to express these concerns. Further, teachers were responsible for using multiple strategies and school resources to help students solve problems in positive ways, lessening the reliance on office discipline referrals. Parents were asked to be respectful in school interactions, including resolving concerns, and to support school policies.

As part of their monitoring procedures, the leadership team elected to have second- and seventh-period teachers complete the Student Risk Screening Scale, a universal screening tool used to detect students who may be at risk for antisocial behavior. Teachers rated each student in their second- and seventh period on 7 items (steal; lie, cheat, sneak; negative attitude; low academic achievement; peer problems; behavior problems; and aggressive behavior) using a 4-point Likert-type scale ranging from 0 (*never*) to 3 (*frequently*). Total scores were used to place students into one of three risk categories (0–3 = low, 4–8 = moderate, 9–21 = high) established by the developer (Drummond). Recent psychometric studies established internal consistency (.79 to .84), test–retest stability, and interrater reliability at the high school level (Lane, Kalberg et al., 2008). In addition, Student Risk Screening Scale scores predicted grade point average, course failures, and office disciplinary referrals 1 and 2 years after initial ratings (Lane, et al., in press).

The school-site leadership team provided instruction and support when teachers completed the Student Risk Screening Scale. The intent was for teachers to complete the scale on the password-protected district server, but during this first attempt, technical problems prohibited all teachers from logging in to the system simultaneously. The team spent a formidable amount of time collecting the screeners which were completed by hand. Technical issues were resolved during the second year of implementation, allowing teachers to complete the Student Risk Screening Scale with greater ease.

Some teachers were initially resistant to the administration's request to complete the behavior screening tool, making it difficult for all students to be considered for all available secondary supports given screening data were often a part of entry criteria for Tier 2 supports.

Beginning With Tier 2

One of the first Tier 2 supports focused on improving self-determined behaviors for at risk 10th- and 11th-grade students. This support was designed

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and implemented in conjunction with the support of a local university—the same university providing the initial training in developing the CI3T model (see shaded row in Figure 1). The description indicates self-determination skills were taught by research assistants to individual students for whom parental consent and student assent were secured. The lessons followed a direct instruction model, focusing on skills such as developing strategies to self-regulate their own learning (e.g., organizational skills, study skills, note take, and participating in discussion), decision making, and help seeking. Specifically, four inclusion criteria were established: a student had to (a) be in 10th or 11th grade, (b) fail two or more courses in the first semester, (c) score in the moderate or high risk category on the Student Risk Screening Scale, and (d) be enrolled in a study hall period (to avoid them missing a core content class to participate in this Tier 2 support). Eleven students met these three criteria. Parental consent and student assent were secured for three students. These students participated in 30-min lessons 3 days per week for 8 weeks. The secondary intervention grid lists measures used to monitor student progress. Also, information is provided as to how integrity of the plan was monitored and social validity was assessed. This program concluded after eight weeks, just prior to the end of the academic year.

Over time, the school-site leadership team designed and implemented other Tier 2 supports independent of university support. Some examples include the following: mentoring programs, enrichment opportunities, targeted algebra II study hall, and ACT intervention. One exceptionally successful Tier 2 support was the mentoring program. The mentors used for this program were volunteers. The school-site team met with interested faculty to provide information regarding the benefit of mentoring for high school youth and define expectations which included the following: establishing two goals with the student on the basis of individualized needs, face-to-face visits at least once per week, handwritten notes three times per week, communication with teachers, counselors, and administrators assigned to the student, and referrals to collaborating agencies when necessary. The assistant principal indicated it was essential for mentors to select their own mentees. She reported the number of volunteer teachers increased exponentially when teachers had choice in selecting mentees versus being assigned mentees by an administrator.

The school-site began by constructing a secondary intervention grid to organize all existing supports as defined in Figure 1. We note that Figure 1 depicts actual school practices, with the exception of treatment integrity and social validity assessment. These suggested procedures are included for school-site leadership teams and researchers interested in designing Tier 2 support adhering to core quality indicators recommended for educational research (Gersten et al., 2005; Horner et al., 2005).

The team members and interested faculty also attended subsequent professional development offerings to learn more about research-based Tier 2

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supports such as self-monitoring strategies and behavioral contracts. The assistant principal indicated the most pronounced challenge with Tier 2 supports was lack of time. It was difficult to convince faculty that time spent at Tier 2 would lead to improved outcomes and successful experiences in the classroom. In other words, the faculty was not confident the knowledge and skill sets developed in targeted supports would generalize to the classroom context (Cooper et al., 2007). The school-site leadership team held regular discussions during faculty meetings to facilitate a shift towards a culture of prevention, away from a culture of reactive approaches to problem solving (e.g., waiting for problems to occur and response with consequence-based tactics). Central to this shift in thinking was helping faculty and staff see the three-tiered framework was not just another program, but a systems-level approach to using data based decision making to inform all intervention decisions.

In addition to developing Tier 2 supports, Liberty High School's school-site leadership team also developed supports for students with the most intensive needs. For example, they accessed university resources for Tier 3 supports such as functional assessment-based interventions (see Majeika et al., 2012) while implementing other Tier 3 supports (e.g., individual counseling) independent of university support.

Summary

The experience of Liberty High School documents one example of how to conduct Tier 2 supports both with and without university participation within the context of a CI3T model, using systematic screening data to detect students requiring supplemental supports. This illustration demonstrates how the school-site leadership persisted despite initial challenges. Treatment integrity data suggest the primary prevention plan was implemented with adequate fidelity (76.43% year 1, 92.68% year 2, 74.82% year 3, and 75.00% year 4), with social validity data from faculty providing important feedback for revising the plan at the end of each academic year.

Concluding Thoughts: Considerations for School Psychologists

In this article, we have established the benefit of using systematic behavior screening tools within the context of three-tiered models to identify and support high school students needing assistance beyond primary prevention efforts. We demonstrated how to use these and other sources of data to connect high school students with Tier 2 supports, providing an illustration of one high school's experience. We conclude by offering considerations for school psychologists who assist with the design, implementation, and evaluation of such models.

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Move Toward Evidence-Based Practices at All Tiers

We encourage school psychologists to participate as active members of the school-site leadership teams, beginning with the design process. Many school psychologists are well-trained in the areas of assessment; intervention design, implementation, and evaluation; and behavioral support techniques such as coaching and instructive feedback (Lau, Sieler, Muyskens, Canter, VanKeuren, & Masten, 2006). These skills are highly valuable, with the potential to assist other team members in using schoolwide data collected as part of primary prevention efforts to connect students to relevant Tier 2 and 3 supports.

It is important to begin by providing structures such as secondary intervention grids to (a) demystify the methods by which additional supports are offered to students, (b) allow equal access to supports, and (c) facilitate communication between all stakeholders (e.g., students, teachers, and parents). Yet, it is equally important to introduce evidence-based practices likely to result in desired outcomes at Tier 2 and 3, as well as Tier 1. These might include interventions such as social skills groups (Elliott & Gresham, 2007) and cognitive behavior therapy (Lipsey & Wilson, 1993), areas often addressed by school counselors and psychologists.

As new interventions, strategies, and programs are needed to support students, the school's psychologist can facilitate the review of available evidence on the practice (e.g., Check In Check Out, Check & Connect, READ 180) as it relates to the school site team's particular goals and context. The review of evidence is important in improving the rigor of practices implemented in high schools. Instructional time is simply too precious to choose a support without sufficient evidence to suggest the intervention goals will be obtained. As such it is important to build school-site personnel's expertise to not only construct three-tiered models of prevention grounded in evidence-based practices, but also sustain and refine these structures over time.

Support Sustainability by Building Expertise

We encourage school-site teams to develop, implement, evaluate, and sustain three-tiered models of prevention to prevent the development of learning and behavior problems and respond more efficiently to support students who do struggle in these areas. Rather than relying solely on teacher referrals to detect students who might benefit from these supports, screening data can be used to determine specific students for possible participation.

We contend systematic screenings of academic and behavioral performance patterns are essential features of such models as they offer a reliable, valid mechanism for accurately detecting students who might benefit from secondary and tertiary supports. As such, we think it is essential to dedicate resources such as professional development time to build administrators',

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teachers', paraprofessionals', and parents' knowledge of and confidence in screening practices. For example, it is imperative school-site personnel build their skills sets in terms of (a) conducting systematic screenings in an efficient manner and (b) using data from screening tools in conjunction with other data sources to connect students to relevant Tier 2 and Tier 3 supports.

Screening should not be avoided or feared as it offers an equitable, resource-efficient method for detecting students for whom primary prevention may be insufficient. Recognizing a concern exists is the first step towards connecting students to supports (Lane et al., 2012).

If screening tools are to be implemented at school sites, it is essential to build stakeholders' expertise in terms of understanding the rationale for screening as well as the mechanics of screening. For example, school personnel need to learn how to select, prepare, administer, score, and interpret findings from academic and behavioral screening tools. To meet this charge, we encourage school psychologists to become active members of school- and district-level leadership teams, working collaboratively to develop procedures to sustain and refine these practices. There are a number of logistical considerations warranting attention such as how and when to allot time during the instructional day to prepare, administer, score, and interpret screening activities (Lane et al., 2009). Given their expertise in assessment and interventions, school psychologists could be very helpful team members by supporting the decision-making process involved with analyzing data; determining appropriate supports, monitoring student responsiveness to the extra supports provided using frequent, repeated assessment; and making decisions as to when the supplemental supports should be changed or concluded.

It is important to have a range of Tier 2 and 3 supports in place such as those illustrated here to accommodate students' identified needs (Lane, Oakes, et al., 2010). The intervention grids described are one method of organizing supports currently available within a given school. It is also a framework for incorporating other evidence-based practices and strategies with sufficient empirical research to indicate desired outcomes are likely obtained. School psychologists have the expertise to assist in the design, implementation, and evaluation of these additional supports, providing valuable technical assistance to other members of the school-site leadership teams (e.g., direct collaborative consultation, coaching, and instructive feedback (Lau et al., 2006).

Given new practices are continually being developed and refined, we recommend ongoing professional development for all stakeholders to remain current on what works. Information gleaned from the research community should be used to refine, revise, and enhance three-tiered models of prevention at the end of each academic year. Although it is absolutely essential to update three-tiered models (Tiers 1, 2, and 3) on the basis of new evidence,

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revisions should not occur during an academic year as this impedes accurate program evaluation efforts.

Conduct Behavioral and Academic Screenings with Care

Last, with any type of screening—vision, hearing, cancer, academic, or behavioral—comes responsibility. Just as it would be unconscionable for a physician to fail to treat early stages of a given disease (e.g., skin cancer), it would be a similarly unethical for teachers or other school-site personnel to identify an initial indication of concern (e.g., lower than average reading comprehension skills or higher than average internalizing behaviors) and then fail to provide an appropriate support to address the noted concern (Lane et al., 2012).

We also encourage individuals interested in learning more about systematic screening tools to not only explore existing tools but also examine state guidelines for systematic screenings as the guidelines vary by state. For example, in many states, parental consent is not required for academic and behavioral screenings provided these activities are a part of regular school practice. However, some states require informed consent (passive or active) before administering behavior screenings. If Tier 2 or 3 supports are warranted, parental consent is needed as extra supports beyond primary prevention efforts require permission.

Summary

As three-tiered models of prevention are introduced in high school settings, it is important to design, implement, and evaluate programs with an appropriate balance between rigor and feasibility. We offer this article to assist the research and teaching communities in achieving this balance. First, we established the benefit of using systematic behavior screening tools within three-tiered models to identify and assist high school students for whom primary prevention efforts are insufficient. Second, we offered one structure for connecting students to secondary (Tier 2) and tertiary (Tier 3) supports according to specific students' needs. Third, we provided an illustration of how one high school connected students with relevant supports, initially with university support and ultimately on an independent basis. We concluded by clarifying the role of school psychologists in assisting school-site teams with implementing, monitoring, and sustaining these procedures as part of regular school practices.

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REFERENCES

Achenbach, T. M. (1991). *The Child Behavior Checklist: Manual for the teacher's report form*. Burlington: University of Vermont, Department of Psychiatry.

American Educational Research Association, American Psychological Association, & National Council for Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.

Bruhn, A., Lane, K. L., & Hirsch, S. (2013). A review of tier 2 interventions conducted within multi-tiered models of prevention evidencing a primary behavioral plan. *Journal of Emotional and Behavioral Disorders*. Advance online publication. doi: 10.1177/1063426613476092.

Carter, E. W., Lane, K. L., Pierson, M., & Glaeser, B. (2006). Self-determination skills and opportunities of transition-age youth with emotional disturbance and learning disabilities. *Exceptional Children*, *72*, 333–346.

Christenson, S. L., Thurlow, M. L., Sinclair, M. F., Lehr, C. A., Kaibel, C. M., Reschly, A. L., ... Pohl, A. (2008). *Check & Connect: A comprehensive student engagement intervention manual*. Minneapolis: University of Minnesota, Institute on Community Integration.

Cochrane, W. S., & Laux, J. M. (2008). A survey investigating school psychologists' measurement of treatment integrity in school-based interventions and their beliefs about its importance. *Psychology in Schools Today*, *45*, 499–507.

Committee for Children. (2007). *Second Steps Violence Prevention*. Seattle, WA: Author.

Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied Behavior Analysis* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.

Council of Chief State School Officers & the National Governors Association Center for Best Practices (2011). *Common Core State Standards Initiative*. Washington, DC: Author.

Crone, D. A., Hawken, L., & Horner, R. H. (2010). *Responding to problem behavior in the school: The behavior education program* (2nd ed.). New York, NY: Guilford Press.

Downing, J. A. (2002). Individualized behavior contracts. *Intervention in School and Clinic*, *37*, 168–172.

Drummond, T. (1994). *The Student Risk Screening Scale (SRSS)*. Grants Pass, OR: Josephine County Mental Health Program.

Elliott, S. N., & Gresham, F. M. (1991). *Social skills intervention guide*. Circle Pines, MN: American Guidance Service.

Elliott, S. N., & Gresham, F. M. (2007a). *Social Skills Improvement System: Classwide intervention program guide*. Bloomington, MN: Pearson Assessments.

Elliott, S. N., & Gresham, F. M. (2007b). *Social skills improvement system: Performance Screening Guide*. Bloomington, MN: Pearson Assessments.

Espin, C., & Chung, S. (2012, April). *Response to Intervention (RTI) for secondary-school students w/LD: How do we measure progress?* Paper presented at the Council for Exceptional Children Conference, Denver, CO.

Forness, S. R., Freeman, S. F. N., Paparella, T., Kauffman, J. M., & Walker, H. M. (2012). Special education implications of point and cumulative prevalence for children with emotional or behavioral disorders. *Journal of Emotional and Behavioral Disorders*, *20*, 4–18.

Fuchs, D., & Fuchs, L. (2006). Introduction to response to intervention: What, why, and how valid is it? *Reading Research Quarterly*, *41*, 93–99.

Downloaded by [VUL Vanderbilt University] at 08:05 10 May 2013

Fuch, L., Fuchs, D., & Compton, D. (2010). Rethinking response to intervention at middle and high school. *School Psychology Review*, *39*, 22–28.

Gersten, R., Fuchs, L. S., Compton, D., Coyne, M., Greenwood, C., & Innocenti, M. S. (2005). Quality indicators for group experimental and quasi-experimental research in special education. *Exceptional Children*, *71*, 149–164.

Good, R. H., & Kaminski, R. A. (Eds.). (2002). *Dynamic Indicators of Basic Early Literacy Skills* (6th ed.). Eugene, OR: Institute for the Development of Educational Achievement. Retrieved from http://dibels.uoregon.edu

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*, 581–586.

Gresham, F. M., Cook, C. R., Collins, T., Dart, E., Rasetshwane, K., Truelson, E., & Grant, S. (2010). Developing a change-sensitive brief behavior rating scale as a progress monitoring tool for social behavior: An example using the Social Skills Rating System–Teacher Form. *School Psychology Review*, *39*, 364–379.

Hasselbring, T. S., & Goins, L. I. (2004). *READ 180*. New York, NY: Scholastic.

Hawken, L. H. (2006). School psychologists as leaders in the implementation of a targeted intervention: The Behavior Education Program (BEP). *School Psychology Quarterly*, *21*, 91–111.

Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S. L., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practices in special education. *Exceptional Children*, *71*, 165–179.

Individuals With Disabilities Education Improvement Act of 2004, 20 U.S.C. 1400 et esq.

Jimerson, S., Egeland, B., Sroufe, L. A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology*, *38*, 525–549.

Kamphaus, R. W., & Reynolds, C. R. (2007). *BASC-2 Behavior and Emotional Screening System (BASC-2 BESS)*. San Antonio, TX: Pearson.

Kelley, M. L., & Stokes, T. F. (1982). Contingency contracting with disadvantage youths: Improving classroom performance. *Journal of Applied Behavior Analysis*, *15*, 447–454.

Lane, K. L., Kalberg, J. R., Bruhn, A. L., Mahoney, M. E., & Driscoll, S. A. (2008). Primary prevention programs at the elementary level: Issues of treatment integrity, systematic screening, and reinforcement. *Education and Treatment of Children*, *31*, 465–494.

Lane, K. L., Kalberg, J. R., & Menzies, H. M. (2009). *Developing schoolwide programs to prevent and manage problem behaviors: A step-by-step approach*. New York, NY: Guilford Press.

Lane, K. L., Kalberg, J. R., Parks, R. J., & Carter, E. W. (2008). Student Risks Screening Scale: Initial evidence for score reliability and validity at the high school level. *Journal of Emotional and Behavioral Disorders*, *16*, 178–190.

Lane, K. L., Menzies, H., Bruhn, A., & Crnobori, M. (2011). *Managing challenging behaviors in schools: Research-based strategies that work*. New York, NY: Guilford Press.

Lane, K. L., Menzies, H., Oakes, W. P., & Kalberg, J. R. (2012). *Systematic screenings of behavior to support instruction: From preschool to high school*. New York, NY: Guilford Press.

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Lane, K. L., Oakes, W. P., Ennis, R. P., Cox, M. L., & Lambert, W. (in press). Additional evidence for the reliability and validity of the Student Risk Screening Scale at the high school level: A replication and extension. *Journal of Emotional Behavioral Disorders*. doi: 10.1177/1063426611407339.

Lane, K. L., Oakes, W. P., & Menzies, H. M. (2010). Systematic screenings to prevent the development of learning and behavior problems: Considerations for practitioners, researchers, and policy makers. *Journal of Disabilities Policy Studies*, *21*, 160–172.

Lane, K. L., Wolery, M., Reichow, B., & Rogers, L. (2006). Describing baseline conditions: Suggestions for study reports. *Journal of Behavioral Education*, *16*, 224–234.

Lang, L., Torgesen, J., Vogel, W., Chanter, C., Lefsky, E., & Petscher, Y. (2009). Exploring the relative effectiveness of reading interventions for high school students. *Journal of Research on Educational Effectiveness*, *2*, 149–175.

Lau, M. Y., Sieler, J. D., Muyskens, P., Canter, A., VanKeuren, B., & Marston, D. (2006). Perspectives on the use of the problem-solving model from the viewpoint of a school psychologist, administrator, and teacher from a large Midwest urban school district. *Psychology in the Schools*, *43*, 117–127. doi: 10.1002/pits.20135

Lipsey, M. W., & Wilson, D. B. (1993). The efficacy of psychological, educational, and behavioral treatment: Confirmation of meta-analysis. *American Psychologist*, *48*, 1181–1209.

Majeika, C. E., Walder, J. P., Hubbard, J. P., Steeb, K. M., Ferris, G. J., Oakes, W. P., & Lane, K. L. (2012). Improving on-task behavior using a functional assessment-based intervention in an inclusive high school setting. *Beyond Behavior*, *20*, 55–66.

May, S., Ard, W., III, Todd, A. W., Horner, R. H., Glasgow, A., Sugai, G., & Sprague, J. (2000). *School-wide Information System (SWIS)*. Eugene, OR: University of Oregon, Educational and Community Supports.

McIntosh, K., Campbell, A. L., Russell, D., & Zumbo, B. D. (2009). Concurrent validity of office discipline referrals and cut points used in schoolwide positive behavior support. *Behavioral Disorders*, *34*, 100–113.

McIntosh, K., Frank, J. L., & Spaulding, S. A. (2010). Establishing research-based trajectories of office discipline referrals for individual students. *School Psychology Review*, *39*, 380–394.

McIntosh, K., Horner, R. H., Chard, D. J., Boland, J. B., & Good, R. H. (2006). The use of reading and behavior screening measures to predict nonresponse to school-wide positive behavior support: A longitudinal analysis. *School Psychology Review*, *35*, 275–291.

Mooney, P., Ryan, J. B., Uhing, B. M., Reid, R., & Epstein, M. H. (2005). A review of self-management interventions targeting academic outcomes for students with emotional and behavioral disorders. *Journal of Behavioral Education*, *14*, 203–331.

Morgan, P. L., Farkas, G., Tufis, P. A., & Sperling, R. A. (2008). Are reading and behavior problems risk factors for each other? *Journal of Learning Disabilities*, *41*, 417–436.

Morris, R. J., Shah, K., & Morris, Y. P. (2002). Internalizing behavior disorders. In K. L. Lane, F. M. Gresham, & T. E. O'Shaughnessy (Eds.) *Interventions for children*

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with or at risk for emotional and behavioral disorders (pp. 223–241). Boston, MA: Allyn & Bacon.

Nelson, J. R., Babyak, A., Gonzalez, J., & Benner, G. J. (2003). An investigation of the types of problem behaviors exhibited by K–12 students with emotional and behavioral disorders in public school settings. *Behavioral Disorders*, *28*, 348–359.

Newstrom, J., McLaughlin, T. F., & Sweeney, W. J. (1999). The effects of contingency contracting to improve the mechanics of written language with a middle school student with behavior disorders. *Child & Family Behavior Therapy*, *21*, 39–48.

Campusware. (2007). *Parent connection*. San Antonio, TX: Author.

Parker, J. G., Rubin, K. H., Erath, S., Wojslawowicz, J. C., & Buskirk, A. (2006). Peer relationships, child development, and adjustment: A developmental psychopathology perspective. In D. Cicchetti (Ed.), *Developmental Psychopathology: Vol. 2: Risk, disorder, and adaptation*. New York, NY: Wiley.

Pearson Education. (2008). *AIMSweb® benchmark and progress monitoring system for grades K–8*. Bloomington, MN: Pearson Education.

Pearson Education. (2009). *Success Maker*. New York, NY: Author.

Pearson Education. (2011). *Schoolnet*. New York, NY: Author.

Positive Action. (2008). *Positive action: Positive development for schools, families, and communities*. Twin Falls, ID: Positive Action.

Roderick, M., & Camburn, E. (1999). Risk and recovery from course failure in the early years of high school. *American Educational Research Journal*, *36*, 303–343.

Seidman, E., Aber, J. L., Allen, L., & French, S. E. (1996). The impact of the transition to high school on the self-system and perceived social context of poor urban youth. *American Journal of Community Psychology*, *24*, 489–516.

Shirk, S. R., Kaplinski, H., & Gudmundsen, G. (2009). School-based cognitive behavioral therapy for adolescent depression: A benchmarking study. *Journal of Emotional and Behavioral Disorders*, *17*, 106–117.

Simonsen, B., Fairbanks, S., Briesch, A., Myers, D., & Sugai, G. (2008). Evidence-based practices in Classroom management: Considerations for research to practice. *Education and Treatment of Children*, *31*, 351–380.

Sinclair, M. F., Christenson, S. L., Evelo, D. L., & Hurley, C. M. (1998). Dropout prevention for youth with disabilities: Efficacy of a sustained school engagement procedure. *Exceptional Children*, *65*, 7–21.

Sinclair, M. F., Christenson, S. L., & Thurlow, M. L. (2005). Promoting school completion of urban secondary youth with emotional or behavioral disabilities. *Exceptional Children*, *71*, 465–482.

Stormont, M., Reinke, W., Herman, K., & Lembke, E. (2012). *Tier two interventions: Academic and behavior supports for children at risk for failure*. New York, NY: Guilford Press.

Sugai, G., Lewis-Palmer, T., Todd, A., & Horner, R. H. (2001). *School-wide evaluation tool*. Eugene: University of Oregon.

Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M. (2000). Preventing school violence: The use of office discipline referrals to assess and monitor school-wide discipline interventions. *Journal of Emotional and Behavioral Disorders*, *8*, 94–101.

Downloaded by [VUL Vanderbilt University] at 08:05 10 May 2013

Sutherland, K. S., Alder, N., & Gunter, P. L. (2003). The effect of varying rates of opportunities to respond to academic requests to the classroom behavior of students with EBD. *Journal of Emotional and Behavioral Disorders*, *11*, 239–248.

Trice, A. D. (1990). Adolescents' locus of control and compliance with contingency contracting and counseling interventions. *Psychological Reports*, *67*, 233–234.

U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, What Works Clearinghouse. Retrieved from http://ies.ed.gov/ncee/wwc

Walker, H. M., Ramsey, E., & Gresham, F. M. (2004). *Antisocial behavior in school: Evidence-based practices*. Belmont, CA: Wadsworth.

Walker, H. M., & Severson, H. (1992). *Systematic Screening for Behavior Disorders: Technical manual*. Longmont, CO: Sopris West.

Williams, R. L., Long, J. D., & Yoakley, R. W. (1972). The utility of behavior contracts and behavior proclamations with advantaged senior high school students. *Journal of School Psychology*, *10*, 329–338.

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